

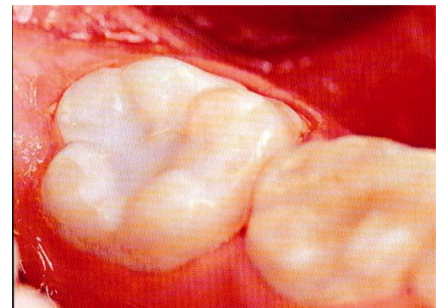
## 2006 NEVADA STATE REPORT ON SCHOOL-BASED DENTAL SEALANT PROGRAMS

According to the National Oral Health Surveillance System (NOHSS), tooth decay is the single most common chronic disease of childhood, occurring five to eight times more frequently than asthma, the second most common chronic disease in children. Tooth decay, left untreated, can cause pain and tooth loss. Untreated decay has also been associated with difficulty in eating and being underweight. In addition, untreated tooth decay and tooth loss can have negative effects on an individual's ability to concentrate in school and on their self esteem.



Nevada ranks as fourth worst in terms of tooth decay among the states that have conducted a standardized data collection process called the Basic Screening Survey (BSS) and ranks third worst in percent of children with untreated tooth decay. (See Appendix, Tables 1 and 2)

Dental sealants are a plastic material painted on the pits and fissures of the chewing surfaces of teeth where up to 90 percent of decay occurs in school children. Sealants prevent tooth decay by providing a physical barrier between bacteria. According to the 2000 Surgeon General's Report on Oral Health, sealants have been shown to reduce decay by over 70 percent. In 2002, the Task Force on Community Preventive Services, an independent, non-federal, multi-disciplinary task force appointed by the director of the Centers for Disease Control and Prevention (CDC), strongly recommended school sealant programs as an effective strategy to prevent tooth decay. In fact, according to the Task Force on Community Preventive Services "community water fluoridation and school-based or school-linked pit and fissure sealant delivery programs are the **only** two population-based measures for prevention and control of dental caries with a strong evidence base." According to the Task Force, children who received sealants in such programs had about a 60% reduction in decay compared to children who did not receive sealants.



Nevada ranks as third worst in the percent of children with dental sealants. (See Appendix, Table 3)

Targeting schools in which 50 percent or greater of the children enrolled are eligible for the federal free and reduced meal program is considered an effective way to reach large numbers of at-risk children. School-based dental sealant programs commonly target

children enrolled in second grade because the newly erupted first permanent molars commonly found in children in this age group can be sealed before they have a chance to develop tooth decay. With additional resources, school-based dental sealant programs can also target children enrolled in sixth grade for placement of dental sealants on newly erupted second permanent molars.

During State Fiscal Year (SFY) 06, there were 320 schools with at least one second grade class. Of these, 136 (43%) were schools in which 50 percent or greater of the children enrolled were eligible for the federal free and reduced meal program. Of schools with a second grade class and with 50 percent or greater eligibility for the federal free and reduced meal program, 53 (39%) received services from a school-based dental sealant program. (See Appendix, Table 4)

In SFY 06, of the 14 counties with at least one school with a second grade and with 50 percent or greater of the students eligible for the federal free and reduced program, eight were served by school-based dental sealant programs. The school-based dental sealant programs in these eight counties are administered by three different organizations. In SFY 06 the Community College of Southern Nevada (CCSN) Dental Hygiene Program's Seal Nevada South program reached 17 schools in Clark County and two schools in Nye County. CCSN placed 4,010 sealants on 1,162 children in these schools. Nevada Health Centers' Seal Nevada North program served one eligible school in Humboldt County and placed 357 sealants on 52 children. Saint Mary's served 33 eligible schools in Churchill, Carson, Lyon, Pershing and Washoe Counties. They placed 2,612 sealants on 712 children in these schools. (See Appendix, Table 5)

Saint Mary's served an additional 14 schools in which less than 50 percent of the children enrolled were eligible for the federal FR program. In these 14 schools, Saint Mary's placed an additional 807 dental sealants on 223 students. Seal Nevada North served one additional school in which less than 50 percent of the children enrolled were eligible for the federal FR program. In this one school, Seal Nevada North placed an additional 251 dental sealants on 40 students. (See Appendix, Table 6)

The total number of all schools served was 68. The total number of sealants placed in all schools was 8,037. The total number of all children served by school-based dental sealant programs was 2,189.

The percent of children returning signed consent forms (either providing *OR* withholding consent), varies widely between eligible schools from a low of five percent to a high of 102 percent. (See Appendix, Table 7)

Analysis of data submitted by the three organizations that implement school-based dental sealant programs showed that in SFY 05, there were 137 eligible (50 percent or greater eligibility for the federal free and reduced meal program) schools in the state. Of these schools, 35 (26 percent) had a school-based dental sealant program. In SFY 05, 4,064 sealants were placed on 1,110 second graders in eligible schools

Analysis of SFY 06 data shows that there were 136 eligible schools and school-based dental sealant programs served 53 (39%) of those schools. In SFY 06, 6,979 sealants were placed on 1,926 second grade children in eligible schools. This reflects a 72 percent increase in the number of sealants placed and a 74 percent increase in the number of children served. (See Table 2, 8, and 9 in the Appendix for a summary of data for school-based dental sealant programs in schools with 50 percent or greater federal FR eligibility in Nevada for SFY 06 and for school-based dental sealant programs in all schools)

In SFY 06, the Nevada State Health Division Oral Health Program provided funding in the amount of \$40,000 to the Community College of Southern Nevada's Seal Nevada South Program, \$12,500 to Nevada Health Centers' Seal Nevada North program and \$12,500 to Saint Mary's. All direct financial support for these programs was provided through a \$65,000 Human Resources and Services Administration (HRSA) State Oral Health Collaborative Systems grant. Administrative and technical support was provided through funding from a Cooperative Agreement with the Centers for Disease Control and Prevention and from the Maternal and Child Health Block Grant.

Healthy People 2010 Goal 21-1 is to reduce dental caries experience in children aged six to eight to 42 percent (67% at present) and Healthy People 2010 Goal 21-8 is to increase sealants in eight year old first molars to 50 percent (33% at present). In order to meet these goals, and implement school-based dental sealant programs in more Nevada at-risk schools, additional resources will be needed. Meeting these goals will result in healthier, happier children who are better able to function at home and in school.

# Appendix

Table 1

**Percentage of 3rd Grade Students with Caries Experience (Treated or Untreated Tooth Decay)**

State	Percent with Caries Experience <sup>1</sup>
Arkansas	72.2 %
Oklahoma	69.4 %
South Dakota	67.7 %
Nevada	67.1 %
New Mexico	64.6 %
Idaho	64.5 %
Utah	61.0 %
Wisconsin	60.1 %
Kansas	58.6 %
Washington	57.5 %
Colorado	57.1 %
Delaware	56.4 %
New Hampshire	52.0 %
Massachusetts	48.8 %
Maine	44.7 %
Vermont	44.3 %
Missouri	N/A

Table 2

**Percentage of 3rd Grade Students with Untreated Tooth Decay**

State	Percent with Untreated Tooth Decay <sup>1</sup>
Arkansas	42.1 %
Oklahoma	40.2 %
Nevada	38.9 %
New Mexico	37.0 %
Delaware	30.9 %
Wisconsin	30.8 %
South Dakota	30.6 %
Kansas	27.6 %
Massachusetts	26.6 %
Idaho	25.8 %
Colorado	25.4 %
Missouri	23.0 %
Utah	23.0 %
New Hampshire	21.7 %
Washington	20.5 %
Maine	20.4 %
Vermont	16.1 %

Table 3

**Percentage of 3rd Grade Students with Dental Sealants on at Least One Permanent Molar Tooth**

State	Percent with Sealants <sup>1</sup>
Vermont	66.3 %
Washington	55.5 %
Massachusetts	53.3 %
Idaho	52.1 %
Utah	50.0 %
South Dakota	49.4 %
Maine	47.6 %
Wisconsin	47.0 %
New Hampshire	45.9 %
New Mexico	43.2 %
Oklahoma	37.2 %
Colorado	36.0 %
Delaware	34.1 %
Kansas	33.1 %
Nevada	32.5 %
Arkansas	24.4 %
Missouri	14.0 %

**Table 4. Number of schools with 50 % of greater federal free and reduced eligibility with a school-based dental sealant program by county**

County	Number of schools with a 2 <sup>nd</sup> grade	Number of schools with a 2 <sup>nd</sup> grade with 50% or greater eligibility for federal Free and Reduced program	Number of schools with a 2 <sup>nd</sup> grade with 50% or greater eligibility for federal Free and Reduced program served by a school-based/school-linked dental sealant program
Carson	6	2	2
Churchill	5	2	2
Clark	188	81	17
Douglas	7	0	NA
Elko	11	4	0
Esmeralda	2	2	0
Eureka	2	1	0
Humboldt	7	5	1
Lander	2	0	NA
Lincoln	4	1	0
Lyon	7	1	1
Mineral	2	1	0
Nye	9	4	2
Pershing	2	1	1
Storey	1	0	NA
Washoe	63	30	27
White Pine	2	1	0
Total	320	136 (43% of all schools)	53 (39% of eligible schools)

**Table 5. Sealants placed and children sealed by county in schools with 50% or greater federal free and reduced eligibility**

Program	Counties served	# of schools served	# of sealants placed	# of children sealed
Seal Nevada South	Clark Nye	17	3,810	1,108
		<u>2</u>	<u>200</u>	<u>54</u>
		<b>19</b>	<b>4,010</b>	<b>1,162</b>
Seal Nevada North	Humboldt	<b>1</b>	<b>357</b>	<b>52</b>
Saint Mary's	Carson City	2	133	38
	Churchill	2	141	34
	Lyon	1	81	23
	Pershing	1	4	1
	Washoe	<u>27</u>	<u>2,253</u>	<u>616</u>
		<b>33</b>	<b>2,612</b>	<b>712</b>
Totals	8	53	6,979	1,926

**Table 6. Sealants placed and children sealed by county in schools with less than 50% federal free and reduced eligibility**

<b>Program</b>	<b>Counties served</b>	<b># of schools served</b>	<b># of sealants placed</b>	<b># of children sealed</b>
Saint Mary's	Carson City	4	171	49
	Churchill	1	62	16
	Lyon	6	347	97
	Pershing	1	78	20
	Washoe	<u>2</u>	<u>149</u>	<u>41</u>
		<b>14</b>	<b>807</b>	<b>223</b>
Seal Nevada North	White Pine	<b>1</b>	<b>251</b>	<b>40</b>
Totals	6	15	1,058	263

**Table 7. Percent of consent forms returned in eligible schools**

<b>School District</b>	<b>Program Serving School</b>	<b>School</b>	<b># enrolled in 2<sup>nd</sup> grade</b>	<b># consent forms returned</b>	<b>% of children returning consent forms</b>
Carson	SM	Empire	85	30	35%
		Mark Twain	107	60	56%
Churchill	SM	EC Best	74	30	41%
	SM	Numa	83	35	42%
Clark	CCSN	Bell	167	135	81%
	CCSN	Booker	55	30	55%
	CCSN	Cahlan	154	107	69%
	CCSN	Carson	56	35	63%
	CCSN	Cortez	152	92	60%
	CCSN	Crestwood	135	52	39%
	CCSN	Fitzgerald	79	39	49%
	CCSN	Herron	158	127	80%
	CCSN	Hewetson	137	106	75%
	CCSN	Lincoln	145	97	67%
	CCSN	Lunt	99	78	79%
	CCSN	McCall	62	42	68%
	CCSN	Paradise	73	51	70%
	CCSN	Petersen	172	113	66%
	CCSN	Squires	146	123	84%
	CCSN	Williams	71	46	65%
	CCSN	Wynn	137	126	92%
Humboldt	NVHV	Winemucca	70	67	96%

<b>School District</b>	<b>Program Serving School</b>	<b>School</b>	<b># enrolled in 2<sup>nd</sup> grade</b>	<b># consent forms returned</b>	<b>% of children returning consent forms</b>
Lyon	CCSN	Silver Springs	83	47	64%
Nye	CCSN	Hafen	94	36	38%
	CCSN	Manse	84	31	37%
Pershing	SM	Lovelock	52	53	102%
Washoe	SM	Agnes Risley	93	60	65%
	SM	Alice Maxwell	49	23	47%
	SM	Anderson	83	47	57%
	SM	Bailey Charter	22	1	5%
	SM	Bernice Mathews	124	72	58%
	SM	Desert Heights	82	35	43%
	SM	Echo Loder	80	43	54%
	SM	Elmcrest	68	43	63%
	SM	Esther Bennett	63	21	33%
	SM	Florence Drake	61	31	51%
	SM	Glenn Duncan	81	22	27%
	SM	Grace Warner	78	32	44%
	SM	Greenbrae	49	25	51%
	SM	Kate Smith	53	19	36%
	SM	Libby Booth	67	34	51%
	SM	Lincoln Park	82	22	27%
	SM	Lois Allen	101	39	39%
	SM	Natchez	17	13	77%
	SM	Rita Cannan	59	31	53%
	SM	Robert Mitchell	50	21	41%
	SM	Roger Corbett	110	43	39%
	SM	Sierra Vista	69	40	58%
	SM	Smithridge	110	61	55%



School District	Program Serving School	School	# enrolled in 2 <sup>nd</sup> grade	# consent forms returned	% of children returning consent forms
	SM	Stead	105	44	42%
	SM	Sun Valley	91	46	51%
	SM	Veterans	73	29	40%
	SM	Virginia Palmer	96	18	19%
Total			4,746	2,703	57%

**Table 8. Summary of data for school-based dental sealant programs in schools with 50 percent or greater federal FR eligibility in Nevada for SFY 06**

Number of schools with a second grade and 50% or greater FR eligibility	135
Number of all schools with a second grade and 50% or greater FR eligibility with a school-based dental sealant program	53
Percent of all schools that have a second grade and 50% or greater FR eligibility that have a school-based dental sealant program	39% (53/135)
Number of second graders in schools that have 50% or greater FR eligibility	13,359
Number of second graders in schools that have 50% or greater FR eligibility and that have a school-based dental sealant program	4,699
Percent of second graders in schools that have 50% or greater FR eligibility and that have a school-based dental sealant program	35% (4,699/13,359)
Number of second graders in schools with 50% or greater FR eligibility with a school-based dental sealant program who had sealants placed	1,926
Percent of second graders in schools with 50% or greater FR eligibility with a school-based dental sealant program who had sealants placed	41% (1,926/4,699)
Number of sealants placed in schools with a second grade and with 50% or greater FR eligibility	6,979

**Table 9. Summary of data for all schools with a school-based dental sealant program**

Number of all schools with a second grade and with a school-based dental sealant program	68
Number of second graders in all schools with a second grade that have a school-based dental sealant program	6,007
Number of second graders in all schools with a school-based dental sealant program who had sealants placed	2,189
Percent of second graders in all schools with a school-based dental sealant program who had sealants placed	36% (2,189/6,007)
Number of sealants placed in all schools with a second grade and a sealant program	8,037